

Date: Sat, 12 Feb 94 04:30:28 PST
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@UCSD.Edu
Reply-To: Ham-Space@UCSD.Edu
Precedence: Bulk
Subject: Ham-Space Digest V94 #26
To: Ham-Space

Ham-Space Digest Sat, 12 Feb 94 Volume 94 : Issue 26

Today's Topics:

Inexpensive GPS
MIR
STS-62 Element Set (94062.636)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 5 Feb 94 17:16:00 GMT
From: agate!doc.ic.ac.uk!uknet!pipex!demon!dis.demon.co.uk!myth.demon.co.uk!
zeus@ucbvax.berkeley.edu
Subject: Inexpensive GPS
To: ham-space@ucsd.edu

In article <4FEB199411293694@zeus.tamu.edu>
tskloss@zeus.tamu.edu "SKLOSS, TIMOTHY WILLIAM" writes:

> In article <1994Feb3.023037.58100@kuhub.cc.ukans.edu>,
> shdomaji@kuhub.cc.ukans.edu writes...
> >I have been intrested in global positioning. I have seen units for under
> >\$600, and pc interface and logging is available. Do the makers of these units
> >pay for the service of the satalites. (Can these signals be received with
> >pc software and receiver or receivers and used for global positioning.)

It is free. The U.S. taxpayer funds it (aren't they nice).

>

> Well, forget making a GPS receiver yourself unless you can get a
> GPS chip from Motorola (\$35). The nature of the signals demands very high
> timing resolution, so high that it requires specially built components. Most
> of which (i think) are incorporated in the Motorola chip. This chip, by the
> way, is the heart of almost all GPS receivers on the current market.
>

Bilgewater. Sorry Tim, this isn't a flame, honestly. GEC/Plessey produce a GP1010 / GP1020 chipset which looks like costing about 100 / pair in quantity, but it is much better than the Motorola (I think?). The GP1010 converts the 1.5 Gigs signal down to a lower frequency digitized version. The GP1020 has 6 digital 'receivers' (correlators, sometimes implemented in software). A lot of manufacturers use their own system, Transputers / custom hardware etc. Time resolution is no problem. The chipset is adjustable and can be calibrated by it's driver software if enough sats are in view. Time is just another dimension like x,y,z (lat, long, height).

> My advice is to wait. GPS prices have already halved in the last two years
> and the interfaces (the most important part in my opinion) just keep on
> getting better. It will soon be like cellular telephones: the whole phone
> on one chip with a few RF pieces; but you won't have to pay for the service.
> Since cars already have GPS's as standard equipment (on some models), you
> will see the prices fall even more.
>
> -tim
>

GPSs are already on a 2 piece chipset + processor. The Iridium system will have GPS receivers built in. I reckon on about \$10 for a chipset by 2000. Easily.

--

Michael S. Cowgill (Mike) _ My opinions! MINEMINEALLMINEHAHAHAHA!
zeus@myth.demon.com (That's me) _ #include <witticism.h> or if #undef
G1VOX@GB7WRG.GBR.EU 44.131.2.76 _ " ...Cracking toast Grommit!... "

Date: 8 Feb 94 00:20:23 GMT
From: netcon!bongo!skylld!jangus@locus.ucla.edu
Subject: MIR
To: ham-space@ucsd.edu

Anybody have recent KEPS for the MIR craft?
I noticed that R0MIR was up and running this weekend along with STS

Amateur: WA6FWI@WA6FWI.#SOCA.CA.USA.NA | "It is difficult to imagine our
Internet: jangus@skyld.tele.com | universe run by a single omni-
US Mail: PO Box 4425 Carson, CA 90749 | potent god. I see it more as a
Phone: 1 (310) 324-6080 | badly run corporation."

Date: Fri, 11 Feb 1994 23:35:04 GMT
From: telesoft!garym@uunet.uu.net
Subject: STS-62 Element Set (94062.636)
To: ham-space@ucsd.edu

STS-62
1 00062U 94062.63664409 .00073440 00000-0 22129-3 0 29
2 00062 39.0115 247.8629 0006644 298.2691 61.7477 15.90695888 27

Satellite: STS-62
Catalog number: 00062
Epoch time: 94062.63664409 = (03 MAR 94 15:16:46.05 UTC)
Element set: 002
Inclination: 39.0115 deg
RA of node: 247.8629 deg Space Shuttle Flight STS-62
Eccentricity: .0006644 Prelaunch Element set JSC-002
Arg of perigee: 298.2691 deg Launch: 03 MAR 94 13:54 UTC
Mean anomaly: 61.7477 deg
Mean motion: 15.90695888 rev/day G. L. Carman
Decay rate: 7.3440e-04 rev/day*2 NASA Johnson Space Center
Epoch rev: 2

(for Shuttle Elements subscription info, email: listserv@alsys.com)

--
Gary Morris KK6YB Internet: elements-request@alsys.com
San Diego, CA, USA Phone: +1 619-457-2700

Date: Thu, 10 Feb 1994 10:30:38 GMT
From: telesoft!garym@uunet.uu.net
To: ham-space@ucsd.edu

References <STS-60,94034.567@alsys.com>, <STS-60,94039.590@alsys.com>,
<STS-60,94040.289@alsys.com>
Reply-To : elements-request@alsys.com
Subject : STS-60 Element Set (94041.688)

STS-60

1 22977U 94006A 94041.68880588 .00001098 -91503-7 80760-5 0 143
2 22977 56.9892 183.8290 0006683 303.1211 56.9216 15.71605210 1146

Satellite: STS-60

Catalog number: 22977

Epoch time: 94041.68880588 = (10 FEB 94 16:31:52.82 UTC)

Element set: 014

Inclination: 56.9892 deg

RA of node: 183.8290 deg

Space Shuttle Flight STS-60

Eccentricity: .0006683

Keplerian Element set JSC-014

Arg of perigee: 303.1211 deg

from NASA flight Day 8 vector

Mean anomaly: 56.9216 deg

Mean motion: 15.71605210 rev/day

G. L. Carman

Decay rate: 1.098e-05 rev/day²

NASA Johnson Space Center

Epoch rev: 114

(for Shuttle Elements subscription info, email: listserv@alsys.com)

--

Gary Morris KK6YB

Internet: elements-request@alsys.com

San Diego, CA, USA

Phone: +1 619-457-2700

End of Ham-Space Digest V94 #26
